

ABSTRACT OF THE DISCLOSURE

The present invention describes encapsulated inorganic resists which are compatible with conventional resist processing and development. The encapsulated inorganic materials increase the plasma etch selectivity of the resists compared to conventional polymeric resists. In effect, these resist systems can act as photoimagable single layer hard mask. In a preferred embodiment, the encapsulated material includes inorganic core particles that are at least partially coated with a moiety having an acid labile or photo-labile protected acidic group such that, upon deprotection, the encapsulated material exhibits greater base solubility.

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